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Houston, Texas 77252-2583
Phone: 713.652.7200

mr# 58724

Contain NO CBI

April 26, 2002

TSCA Document Control Office (MC-7408)
Office of Pollution Prevention and Toxics
Room 6428
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue NW
Washington DC 20460-0001

Attention: TSCA 8(e) Coordinator

RE: **Pyrolysis C5 – Dose Range Finding Study in Rats by Inhalation Exposure**

Dear Sir or Madam:

Equistar Chemicals, LP (Equistar) has received preliminary results from a dose range finding study that was conducted for Pyrolysis C5. We are submitting a summary of the results of this study in accordance to Section 8(e) of the Toxic Substances Control Act (TSCA) and EPA's 1991 Section 8(e) Reporting Guide because it includes a finding that EPA may consider to be 8(e) reportable. Equistar has not made a determination as to whether a significant risk of injury to health or the environment is actually presented by the findings.

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Pyrolysis C5 was tested pursuant to the American Chemistry Council Olefins Panel testing plan for the C5 Non-Cyclics Category under the High Production Volume Chemical Challenge Program. The Pyrolysis C5 stream is a hydrocarbon distillate fraction separated from pyrolysis gasoline that consists primarily of C5 dienes and low levels of higher boiling C4 substances and volatile C6 hydrocarbons. The Pyrolysis C5 stream encompasses the substance identified by CAS Registry Number 68476-55-1 (*Hydrocarbons, C1-4, debutanizer fraction*) which is manufactured by Equistar.

The study was a probe study to develop information to aid in the selection of exposure concentrations for a planned OECD 422 study. As a probe, the experimental design of the study was limited consisting of four groups of six pregnant female rats exposed on Day 12 to Day 19 of gestation (6 hours/day) to 0, 1000, 3000, or 5000 ppm Pyroiysis C5 atmospheres and evaiuated for clinical observations, body weight, feed consumption, gross pathology, and gross fetal/litter effects. Statistical analysis of the results was not performed due to the small sample sizes of the probe study.

The animals that were exposed to 5000 ppm Pyrolysis C5 exhibited marked nervous system clinical signs during and after the first and second exposures. These animals were noted during exposure to be less responsive to external stimuli and showed "hunched" posture. On the morning following the exposure, the animals were sensitive to touch and had "hunched" posture. Prior to the third exposure, one animal exhibited a convulsive episode and subsequently died. Exposure to the remaining 5 animals of this group was ceased and the animals were euthanized and necropsied. Internal macroscopic changes in the dams consisted of congested lungs. There were no marked *in utero* losses or dead fetuses noted.

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To our knowledge, this is the first report of mortality and nervous system clinical signs in laboratory animals exposed to 5000 ppm Pyrolysis C5 aerosol. Attached is a summary of the terminal synopsis and tabulated data of the study received from the laboratory. We will forward the final report for this study when it is completed.

Specific questions concerning this submission should be directed to my attention at 713-309-2136. Thank you for your assistance in this regulatory matter.

Sincerely,

Patrick Gibson
Product Safety Specialist - Regulatory
Corporate TSCA Coordinator
Equistar Chemicals, LP

Enclosure

Cc: Dr. W. Claude White